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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/575,797

Filing Date: April 13, 2006

Appellant(s): PEETERS ET AL.

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Michael E. Belk  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed on November 9, 2009 appealing from the Office action mailed July 7, 2009.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relyed Upon**

2004/0121568

Kim et al.

8-2005

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 1, 7 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (US PG Pub 2004/0121568).

Kim et al. teaches, in Figure 12, a elastomeric stamp **1** for printing a pattern on a substrate **4** with an ink **2**, the stamp being at least partially formed from a first material, the stamp comprising a first surface (being the surface of the protrusion **5** covered with adhesion reduction layer **10**), a second surface in a second plane (being the back of the stamp), and a third surface extending between first and second surface (the right wall side extending between the two) wherein the third surface is permeable to ink (paragraph 99, the entire device being made of a soft elastomeric material, being preferably PDMS), and a barrier layer **10** impermeable to ink on the first surface and not on the second surface (the barrier layer **10** is on the first surface, being the top of the protrusion, and clearly not the on the back surface).

For claims 7 and 23: Kim et al. teaches, in Figure 15, an elastomeric stamp in the preferred shape, as having a slanted side wall to prevent side wall deposition of metal, the side wall being the third wall and having an acute angle of between 60 and less than 90 degrees (see Fig. 15). Since this is the preferred shape, the stamp of Fig. 12 with the barrier layer can also be made with this shape.

***Claim Rejections - 35 USC § 103***

2. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US PG Pub 2004/0121568).

Kim et al. teaches all of the limitations of claim 22 except that the diffusion coefficient of ink in a material of the barrier layer is at least a decade smaller than the coefficient in the first material. It is known the first material is PDMS (see paragraph 39), which is absorbent to organic compounds and that the barrier layer is intended to reduce the adhesion and is made of an organic compound such as Teflon and reduces the diffusion coefficient. While the specific rate of diffusion is not disclosed, MPEP Section 2144.05 Section II Part A on the Optimization of Ranges and Routine Experimentation cites a holding that says that "it is not inventive to discover optimum ranges or workable ranges through routine experimentation". In the present case, the objective of having the barrier layer have a lower diffusion coefficient is already known and thus the specific ratio of the coefficient can be changed by routine experimentation, wherein it would be optimal for the coefficient of the barrier layer to be as small as possible. Thus one of ordinary skill in the art at the time the invention was made would make the diffusion coefficient of ink at least ten times smaller than through the barrier

layer as opposed to the elastomeric material for the purposes of preventing ink from seeping through the barrier into the stamp at the printing contact surface.

**(10) Response to Argument**

Appellant argues with respect to claim 1, that the limitation "the third surface being permeable to the ink" is not taught. In the rejection, the third surface is referred to as "the right wall side" extending between the surface of the protrusion 5 and the back of the stamp.

The entire stamp is made from Polydimethylsiloxane, PDMS, which is a material which is not absorbent to water based aqueous solutions, but is known for being able to absorb organic compounds. The ink which is used in elastomeric stamp printing is typically an organic and oily solution. The Abstract of Appellant's own invention describes its stamp to be made out of a first material, being the same PDMS, and the first material being a reservoir for the ink used through absorption.

Appellant argues that Kim et al. does not teach apply an ink. However, this limitation does not appear in the claim language. Kim et al. teaches that the stamp is for printing a pattern on a substrate with an ink", which does not positively recite the ink and is furthermore a process step which does not structurally limit the apparatus claim. The stamp taught by Kim et al. is capable of being used for printing an ink in the same fashion that the invention of Appellant's invention and comprises all of the structure limitations in the claims. The suggestion of PDMS as the material for the stamp (see

paragraphs 15, 38, 39 and 91 among others of Kim et al.) is for a material which is permeable to ink.

Appellant does not present arguments for claim 23 as the title of the section suggests, but rather for claim 22. Here appellant alleges that Examiner's rejection is based on a "per se rule that 'it is no inventive to discover optimum or workable ranges through routine experimentation'". Examiner does not allege a per se rule with regard to routine experiment, but does cite to MPEP Section 2144.05 Section II Part A on the Optimization of Ranges and Routine Experimentation in the rejection. Appellant argues that it would not have been obvious to one of ordinary skill in the art at the time the invention was made to perform a routine experimentation to arrive at the product of claim 1 wherein the barrier layer has a diffusion coefficient that is at least ten times smaller than the diffusion of the first material. Examiner disagrees. In the Kim et al. reference, the inventor uses a layer of Teflon to cover the PDMS stamp to reduce the adhesiveness of the surface, Teflon being a material which does not absorb either water or oil based inks. It would have been desirable to the inventor to ensure that the absorptiveness of the Teflon layer is at least ten times less than the absorptiveness of the stamp as the reduction in absorption reduces adhesion, which is the desired feature.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

*/David H. Banh/*

Conferees:

*/Judy Nguyen/*  
Supervisory Patent Examiner, Art Unit 2854

*/Michael J Sherry/*  
Quality Assurance Specialist, TC 2800